

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PF/3 - 22883/M	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/EP2004/050607	International filing date (day/month/year) 26/04/2004	(Earliest) Priority Date (day/month/year) 09/05/2003
Applicant CIBA SPECIALTY CHEMICALS HOLDING INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 9 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C69/76 B41M5/30 C07C69/88

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C B41M

Is documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, PAJ, WPI Data, BEILSTEIN Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 395 680 B1 (HAYAKAWA KUNIO ET AL) 28 May 2002 (2002-05-28) column 1, lines 7-13; Table 1, compounds 53 and 54; Column 18, lines 74; preparation example 4 and example 4 -----	1,6,8,9, 12
X	US 4 608 579 A (TANIGUCHI KEISHI) 26 August 1986 (1986-08-26) column 3, lines 7-column 8, line 30; column 12, compounds VI-13 and VI-17 -----	1,6,8,9, 12
X	PATENT ABSTRACTS OF JAPAN vol. 010, no. 134 (M-479), 17 May 1986 (1986-05-17) -& JP 60 259494 A (RICOH KK), 21 December 1985 (1985-12-21) page 529, compounds 1,2,4,5,8-10 abstract ----- -/-	1,6,8,9, 12



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

26 October 2004

Date of mailing of the international search report

31. 01. 2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13, 5 February 2001 (2001-02-05) -& JP 2000 302732 A (RICOH CO LTD; NICCA CHEMICAL CO LTD), 31 October 2000 (2000-10-31) page 8, compounds 53 and 54 abstract -----	1,6,8,9, 12
X	US 2 830 970 A (TAWNEY PLINY O) 15 April 1958 (1958-04-15) column 2, lines 10,11 column 4, line 74 - column 5, line 18 -----	1,10
X	PATENT ABSTRACTS OF JAPAN vol. 010, no. 292 (C-376), 3 October 1986 (1986-10-03) & JP 61 109757 A (SUMITOMO CHEM CO LTD), 28 May 1986 (1986-05-28) cited in the application abstract -----	10
X	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 08, 29 September 1995 (1995-09-29) -& JP 07 118209 A (FUJI PHOTO FILM CO LTD), 9 May 1995 (1995-05-09) abstract -----	10
X	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 10, 30 November 1995 (1995-11-30) -& JP 07 173108 A (FUJI PHOTO FILM CO LTD), 11 July 1995 (1995-07-11) abstract -----	10
X	GB 978 853 A (MONSANTO CO) 23 December 1964 (1964-12-23) claim 1; example 2; page 3, line 33-page 4, line 10 -----	1
X	DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; BAI, JAEIL ET AL: "New organic photorefractive material composed of a charge-transporting dendrimer and a stilbene chromophore" XP002300422 retrieved from STN Database accession no. 2000:36977 abstract ----- -/--	1

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>& PROCEEDINGS OF SPIE-THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING , 3799(ORGANIC PHOTOREFRACTIVES, PHOTORECEPTORS, WAVEGUIDES, AND FIBERS), 22-30 CODEN: PSISDG; ISSN: 0277-786X, 1999,</p> <p>-----</p> <p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SHIN, JAE HO ET AL: "Trifluoroacetophenone derivative-based carbonate ion-selective electrodes: effect of diluent pH on the anion selectivity" XP002300423 retrieved from STN Database accession no. 1999:436044 abstract</p> <p>& JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol. 468, no. 1, 1999, pages 76-84,</p>	1
X	<p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; ROSENTHAL, UWE ET AL: "Preparation and properties of hexasubstituted benzenes" XP009037778 retrieved from STN Database accession no. 1987:406892 abstract</p> <p>& JOURNAL FUER PRAKTISCHE CHEMIE (LEIPZIG), vol. 328, no. 3, 1986, pages 335-341,</p>	1
X	<p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; HAEBERLEIN, HARALD ET AL: "Amorphous copolyester with glass transition temperatures above 100.deg." XP001183925 retrieved from STN Database accession no. 1974:71153 abstract</p> <p>& ANGEWANDTE MAKROMOLEKULARE CHEMIE ,, vol. 33, 1973, pages 111-127,</p> <p>-----</p> <p>-/--</p>	1

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; WENKERT, ERNEST ET AL: "Derivatives of hemimellitic acid. A synthesis of erythrocentaurin" XP002270045 retrieved from STN Database accession no. 1964:461566 abstract & JOURNAL OF ORGANIC CHEMISTRY, vol. 29, no. 9, 1964, pages 2534-2542, -----</p>	1
X	<p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; BARTON, DEREK H. R. ET AL: "Nature of the .alpha..omega.-rearrangement" XP009037873 retrieved from STN Database accession no. 1974:463304 abstract & JOURNAL OF THE CHEMICAL SOCIETY, PERKIN TRANSACTIONS 1: ORGANIC AND BIO-ORGANIC CHEMISTRY (1972-1999), vol. 7, 1974, pages 781-92, -----</p>	1
X	<p>DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SASAKI, SHIN-ICHI ET AL: "Trifluoroacetophenone derivatives as amino acid selective ionophores for the potentiometric determination of phenylalanine" XP001183926 retrieved from STN Database accession no. 2002:670853 abstract & ANGEWANDTE CHEMIE, INTERNATIONAL EDITION, vol. 41, no. 16, 2002, pages 3005-3007, -----</p>	1
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP009037795 Database accession no. BRN 2302642, 2302666 abstract & DRECHSLER, ET AL.: J. PRAKT. CHEM. 23, 1964, pages 10-18, -----</p>	1
	-/--	

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP002300430 Database accession no. BRN 3520032 abstract & NIEDERL ET AL.: IND. ENG. CHEM. 30, 1938, pages 1269-1272,</p> <p>-----</p>	1
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP009037779 Database accession no. BRN 8792442 abstract & ALCALDE, E. ET AL.: J. ORG. CHEM., vol. 66, no. 7, 2001, pages 2291-2295,</p> <p>-----</p>	1
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP002300433 Database accession no. BRN2684300 abstract & STARRATT, A.N.: CAN. J. CHEM. 46, 1968, pages 767-770,</p> <p>-----</p>	1
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP002300434 Database accession no. BRN 7606148 abstract & MOLONEY, M. ET AL.: TETRAHEDRON, ASYMMETRY, vol. 7, no. 9, 1996, pages 2551-2562,</p> <p>-----</p>	1
X	<p>DATABASE BEILSTEIN BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; XP002300435 Database accession no. BRN 9299521 abstract & IWAMOTO, H. ET AL.: TETRAHEDRON LETT., vol. 43, no. 45, 2002, pages 8191-8194,</p> <p>-----</p>	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/050607

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16 (part)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/050607

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6395680	B1	28-05-2002	FR 2794121 A1	01-12-2000
			JP 2000355168 A	26-12-2000
			JP 2000355574 A	26-12-2000
US 4608579	A	26-08-1986	JP 1995431 C	08-12-1995
			JP 7012745 B	15-02-1995
			JP 61199989 A	04-09-1986
			JP 60248396 A	09-12-1985
			JP 1966356 C	18-09-1995
			JP 6094231 B	24-11-1994
			JP 60255484 A	17-12-1985
			JP 60255486 A	17-12-1985
			JP 1956533 C	10-08-1995
			JP 6079872 B	12-10-1994
			JP 61066691 A	05-04-1986
			JP 1956538 C	10-08-1995
			JP 6079869 B	12-10-1994
			JP 61116586 A	04-06-1986
JP 60259494	A	21-12-1985	NONE	
JP 2000302732	A	31-10-2000	NONE	
US 2830970	A	15-04-1958	DE 1163538 B	20-02-1964
			FR 1158895 A	20-06-1958
			GB 800294 A	20-08-1958
JP 61109757	A	28-05-1986	NONE	
JP 07118209	A	09-05-1995	NONE	
JP 07173108	A	11-07-1995	NONE	
GB 978853	A	23-12-1964	NONE	

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16(part)

Compounds of formula (1) according to claim 1 wherein A represents phenylene; mixtures, heat sensitive compositions, recording materials comprising them, processes for the manufacture of these compounds and their use for the manufacture of a heat sensitive recording material.

2. claims: 1-16(part)

Compounds of formula (1) according to claim 1 wherein A represents biphenylene, mixtures, heat sensitive compositions, recording materials comprising them, processes for the manufacture of these compounds and their use for the manufacture of a heat sensitive recording material.

3. claims: 1-16(part)

Compounds of formula (1) according to claim 1 wherein A represents naphthylene and anthrylene, mixtures, heat sensitive compositions, recording materials comprising them, processes for the manufacture of these compounds and their use for the manufacture of a heat sensitive recording material.
